



# Connecticut Department of Energy and Environmental Protection



Connecticut Department of  
**ENERGY &  
ENVIRONMENTAL  
PROTECTION**

# Draft “Weatherization” Definition for Residential Units in CT

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Connecticut Department of Energy and Environmental Protection

# Background

- 2011 Connecticut General Statutes 16-245m amended
  - CT's C&LM Plan must include steps to achieve 80% weatherization of residential units by 2030.
- 2012 Draft definition; Public comments received
- 2014 Baseline assessment conducted to provide a snapshot of the status of weatherization statewide for single-family homes. This study informed the usefulness of the draft definition.
- 2015 updated draft definition to reflect comments on previous draft definition and information from baseline assessment.



# 2014 baseline assessment of single-family homes

- 26% meet the performance based definition
- 5% meet the prescriptive based definition
- Non-low-income homes are more likely to have achieved the definition (29%) than are low-income homes (15%).
- 50% homes heated by electricity comply.
- 22% homes heated by natural gas.
- 25% homes heated with oil/other fuels comply.
- The most significant predictors of weatherization
  - participation in the utility-administered Home Energy Solutions program,
  - age of the homes
  - If the home was primarily heated by electricity.



# Proposed Definition

- Not a strategy, it is a broad definition
  - Statute does not include a definition of what “weatherization” is.
  - Defining “weatherization” provides a tool to assist in implementation strategies; definition is not a strategy itself.
- 3 Approaches
  - United States DOE Home Energy Score
  - Prescriptive Approach
  - Performance Approach which provides for the overall performance of a home to be assessed and the results compared to a computer model.
  - A home only needs to meet one of these approaches to be considered “weatherized”



# US DOE Home Energy Score

- [DRAFT] A Home Energy Score of five (5) may be used to conclude that a Connecticut home is “weatherized.”
- Score provides an asset based rating scale of 1 to 10
- The 1 to 10 score is:
  - fuel blind (gas, electric, oil, etc)
  - adjusted for climate and location
  - based on equally sized energy bills (heating, cooling, electricity)



# Prescriptive Approach

- At least five (5) of the requirements listed in the Weatherization Prescriptive Checklist below:
- DEEP is considering making 3/5 be specific requirements (ex. must include air sealing and insulation, other)

Building Element	Prescriptive Requirements (and Performance Approach modeling inputs)
Above Grade Walls	R-11
Flat Ceilings	R-30
Cathedral Ceilings	R-19
Boundary of Frame Floor and Unconditioned Space	Frame floor separating unconditioned space (basement, garage, crawlspace, etc.) from conditioned space is insulated to R-13
Basements with finished interior walls	Interior walls fully insulated to R-5
Windows	U-0.50 (Double pane or single pane with storm) windows
Air Leakage	9 ACH @ 50 Pascals
Duct Leakage For Ducts Outside Conditioned Space	16 CFM @ 25 Pascals per 100 sq. ft. of conditioned space
Duct Insulation: Unconditioned Basements	R-2
Duct Insulation: Unconditioned Attics and Crawlspace	R-4.2



# Performance Based Approach

- If a home demonstrates energy usage that is less than or equal to the same home conforming to the Prescriptive Approach, it will be considered weatherized under the Performance Approach.
- Ex.) Home with single pane windows without storm windows may still be defined as weatherized if:
  - there is additional insulation or improved duct leakage performance to compensate for the less efficient windows.
- Home energy performance assessor uses an industry standard computer model that uses the specifications provided in the table of Prescriptive Requirements as inputs
- Other performance approaches possible [ex. equivalency with US DOE Weatherization Assistance Program]





# Key Points

- This is simply a “big picture” definition, not a strategy
- Calling a home “weatherized” does not mean it is reaching the full benefits of high efficiency performance
- Homeowners will be encouraged to pursue higher efficiency performance
- Definition does not affect a home’s eligibility to participate in HES or HES-IE or Weatherization Assistance Program
- DEEP is accepting public comments through August 28, 2015 on the draft definition. Please send to [DEEP.Weatherization@ct.gov](mailto:DEEP.Weatherization@ct.gov).



# Questions/Comments?

[www.ct.gov/deep/weatherization](http://www.ct.gov/deep/weatherization)

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